

What is claimed is:

1 1. A refrigerant pump comprising:
2 a sealed casing;
3 an electric motor having a stator disposed outside the sealed casing
4 and a rotor disposed within the sealed casing;
5 a pump mechanism juxtaposed with the electric motor; and
6 a drive shaft for transmitting a rotational force of the rotor to the pump
7 mechanism,
8 wherein the stator is positioned closer to the pump mechanism than the
9 rotor is.

1 2. The refrigerant pump according to claim 1, wherein the drive shaft has
2 a large-diameter portion having first and second end surfaces opposite to each other,
3 the first end surface positioned remote from the electric motor having a higher
4 precision than the second end surface.

1 3. The refrigerant pump according to claim 2, wherein a surface of the
2 drive shaft is carburized or nitrided.

1 4. A refrigerant pump comprising:
2 a sealed casing;
3 an electric motor having a stator disposed outside the sealed casing
4 and a rotor disposed within the sealed casing;
5 a pump mechanism juxtaposed with the electric motor;
6 a drive shaft for transmitting a rotational force of the rotor to the pump
7 mechanism; and
8 a bearing for rotatably supporting the drive shaft,
9 wherein at least one of the drive shaft and the bearing has a carburized
10 or nitrided surface.

1 5. A refrigerant-circulating cooling device comprising a refrigerant pump
2 according to any one of claims 1 to 4, wherein the refrigerant pump is free from oil.